

REMARKS

Claims 1-20 are pending in this application.

Claims 1-20 have been rejected.

Claims 1-12 have been amended as shown above.

Reconsideration of Claims 1-20 is respectfully requested.

I. Amendments to the Specification

The Applicants have amended the specification to correct typographical errors and to make minor corrections. No new matter has been entered into the specification as a result of these amendments.

II. Amendments to the Claims

The Applicants have amended Claims 1-3 to delete bullet points (i.e., hyphens) before the various claim elements. The Applicants have also amended Claims 2-12 to replace the European style phrase “characterized in that” with the word “wherein.” The Applicants have also amended Claim 11 to spell out the words “five lumens” in place of the abbreviation “5 lm.”

III. 35 U.S.C. § 103 – Obviousness

In the September 25, 2003 Office Action the Examiner rejected Claims 1-20 under 35 U.S.C. § 103(a) as being obvious over United States Patent No. 4,870,484 to Sonehara (“Sonehara”) in view of United States Patent No. 6,213,615 to Siitari (“Siitari”). The Applicants respectfully traverse these rejections.

During *ex parte* examinations of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. MPEP § 2142; *In re Fritch*, 972 F.2d 1260, 1262, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). Only when a *prima facie* case of obviousness is established does the burden shift to the applicant to produce evidence of non-obviousness. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 USPQ 870, 873 (Fed. Cir. 1985).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not be based on an applicant's disclosure. MPEP § 2142.

For the reasons set forth below the Applicants respectfully submit that the Patent Office has not established a *prima facie* case of obviousness with respect to Claims 1-20 of the Applicants' invention.

The Applicants respectfully direct the Examiner's attention to Claim 1. Claim 1 sets forth unique and novel claim elements.

1. (Currently amended) An assembly comprising:
a display device provided with a pattern of pixels associated with color filters, and
an illumination system for illuminating the display device,
said illumination system comprising a light-emitting panel and at least one light source, said light source being associated with the light-emitting panel,
the light source comprising at least three light-emitting diodes having different light-emission wavelengths,
said light-emitting diodes being associated with the color filters,
said illumination system operable to drive the at least three light-emitting diodes to change a color temperature of a picture to be displayed by the display device. (Emphasis added).

The *Sonehara* reference discloses and claims a color display device. The *Sonehara* color display device includes a light shutter mechanism that controls the amount of light passing through the shutter. *Sonehara* recites the use of the light shutter mechanism to control the amount of light provided to color filters. *Sonehara* lacks any mention of driving at least three "light-emitting diodes" to change a "color temperature" of one or more pictures displayed by a display device. In fact, *Sonehara* contains no mention of taking any steps to control the "color temperature" of a picture to be displayed. The Examiner stated that *Sonehara* does not teach "said illumination system operable to drive the at least three light-emitting diodes to change a color temperature of a picture to be displayed by the display device" (September 25, 2003 Office Action, Page 2, Lines 21-23). The Applicants agree that the *Sonehara* reference does not disclose this feature.

The Examiner also stated that “Sonehara appears to only use the shutter mechanism (LCD) to control the amount of light provided to color filters and does not appear to change the drive signal to each LED as a additional means of change.” (September 25, 2003 Office Action, Page 3, Lines 1-3). The Applicants agree that the *Sonehara* reference teaches using only the shutter mechanism (LCD) to control the amount of light provided to the color filters and does not change the drive signal to each LED as an additional means of change.

The Examiner then stated that the *Siitari* reference teaches “an illumination system operable to drive the at least three lamps to change a color temperature of a picture to be displayed by the display device (abstract, and figures 2 and 3). (September 25, 2003 Office Action, Page 3, Lines 4-6). The Examiner also stated that “It is noted that Siitari uses lamps instead of LEDs but LEDs would have been an OBVIOUS FUNCTIONAL EQUIVALENT SUBSTITUTE.” (September 25, 2003 Office Action, Page 3, Lines 7-9) (Emphasis in original).

The Applicants respectfully submit that the *Siitari* reference demonstrates that an LED is not the functional equivalent of a lamp. The *Siitari* lamps have different color temperatures. “According to the invention [i.e., the *Siitari* device] the liquid crystal panel is lit by two or more background light lamps with different color temperatures.” (*Siitari*, Column 2, Lines 57-59). Each lamp of the *Siitari* device has all of the three wavelength ranges for the three colors red, blue, and green. This may be seen by referring to Fig. 2 of the *Siitari* reference. Fig. 2 shows that lamps 1, 2, 3, 4 and 5 are always employed separately. That is, only one of the five lamps is switched into the circuit at any one time. The fact that one lamp is used at a time means that each lamp possesses all of the three wavelength ranges for the three colors red, blue and green.

It is clear that if the *Siitari* lamps 1, 2, 3, 4 and 5 were replaced with LEDs 1, 2, 3, 4, 5, then switching out (i.e., replacing) a first LED with a second LED (in the same manner as *Siitari*

switches out and replaces the lamps) would change the LED light source from one that has a first range of wavelengths to a second LED light source that has a second range of wavelengths. This means that the *Siitari* device would not be able to display all colors (including the color white which is a mixture of all three colors red, blue and green). This result clearly shows that a light emitting diode (LED) is not a functional equivalent of a lamp.

The Examiner stated that “It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the *Sonehara* apparatus to have ‘said illumination system operable to drive the at least three light-emitting diodes to change a color temperature of a picture to be displayed by the display device” (September 25, 2003 Office Action, Page 3, Lines 12-15). The Applicants respectfully traverse the conclusion of the Examiner that it would have been obvious to combine the *Sonehara* reference and the *Siitari* reference.

Under the applicable patent law, there must be some teaching, suggestion or motivation to combine the *Sonehara* reference and the *Siitari* reference. “When a rejection depends on a combination of prior art references, there must be some teaching, or motivation to combine the references.” *In re Rouffet*, 149 F.3d 1350, 1355-56, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998). “It is insufficient to establish obviousness that the separate elements of an invention existed in the prior art, absent some teaching or suggestion, in the prior art, to combine the references.” *Arkie Lures, Inc. v. Gene Larew Tackle, Inc.*, 119 F.3d 953, 957, 43 USPQ2d 1294, 1297 (Fed. Cir. 1997). The Applicants respectfully submit that there exists no teaching, suggestion or motivation in the prior art to combine the teachings of the *Sonehara* reference and the teachings of the *Siitari* reference.

As previously noted, there is nothing in the *Sonehara* reference that even mentions driving at least three “light-emitting diodes” to change a “color temperature” of one or more

pictures displayed by a display device. *Sonehara* contains no mention of taking any steps to control the “color temperature” of a picture to be displayed.

The Examiner indicated that the motivation to combine the references is found in the *Siitari* reference. “*Siitari* provides the motivation for *Sonehara* to drive his light source to change the color temperature, for example *Siitari* teaches in abstract the benefits of this concept, ‘the color temperature range of the background light is extended and better opportunities for adjusting the pass rate of the light are provided.’ ” (September 25, 2003 Office Action, Page 3, Lines 15-18).

The Applicants respectfully submit that the actual language of the Abstract in the *Siitari* reference states “the color temperature range of the background light is extended and better opportunities for adjusting the color temperature by changing the pass rate of the light are provided.” (Emphasis added) (*Siitari*, Abstract, Lines 6-9). The *Siitari* reference is concerned solely with adjusting color temperatures and the *Sonehara* reference is not concerned at all with any color temperatures. In these circumstances, the Applicants respectfully assert that the motivation that supposedly exists in the *Siitari* reference is insufficient to provide a motivation to combine the *Siitari* reference with the *Sonehara* reference.

The Applicants respectfully assert that the Examiner has inappropriately applied hindsight when combining the teachings of the *Sonehara* reference and the *Siitari* reference in order to arrive at the claimed invention recited in Claims 1-20. The teaching of the use of an illumination system to drive at least three light-emitting diodes to change a color temperature of a picture in combination with a color display device comes from the Applicants’ patent application. Therefore, the Applicants respectfully submit that the rejection of Claims 1-20 under 35 U.S.C. §103(a) should be withdrawn.

Independent Claims 1, 13, and 14 each recite an “illumination system” that is operable to drive at least three light-emitting diodes to change a “color temperature” of one or more pictures to be displayed by a “display device.” Accordingly, the Applicants respectfully request withdrawal of the § 103 rejections and full allowance of independent Claims 1, 13, and 14 (and their dependent claims).

IV. CONCLUSION

The Applicants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. The Applicants reserve the right to submit further arguments in support of their above stated position, as well as the right to introduce relevant secondary considerations including long-felt but unresolved needs in the industry, failed attempts by others to invention the invention, and the like, should that become necessary.

SUMMARY

For the reasons given above, the Applicants respectfully request reconsideration and allowance of pending claims and that this application be passed to issue. If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Applicants respectfully invite the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@davismunck.com*.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Davis Munck Deposit Account No. 50-0208.

Respectfully submitted,

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